Regional Inequalities and Economic Downturns

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ABSTRACT

The aim of this paper is to analyze the impact of economic downturns on regional inequalities. From a theoretical point of view regional inequalities may change in the aftermath of economic downturns if different regions have a different degree of resilience to a common shock or/and a different speed of adjustment.

To test for this hypothesis we estimate the dynamic response of regional inequalities to economic downturns, controlling and interacting for country's structural and policy variables associated to regional inequalities. The set of such variables includes, among others, the share of rural population, demographic changes, educational disparities, production diversification, the level of country development, the size of fiscal transfers and social spending.

The approach we propose consists of estimating Impulse Response Functions (IRFS) based on local projections (Jordan, 2005) of the effect of downturns on regional inequalities. For each period, we estimate a direct and and an indirect effect which takes into account the interaction between the downturn occurrence and the structural/policy variables. In detail, for each future period *k* we estimate the following equation:

$$v_{i,t+k} - v_{i,t-1} = \alpha_i + \sum_{j=1}^{l} \gamma_{jk} \Delta v_{i,t-j} + \beta D_{i,t} + \theta X_{i,t} + \delta (X_{i,t} - \bar{X}) D_{i,t} + \varepsilon_{i,t}^{k}$$

for k=0, 1, 2, n.

Where:

- v_i is a masure of regional inequalities (such as the standard deviation or the coefficient of variation of the log of the regional real GDP per capita) for country *i*.
- D_i is a dummy variables that takes value 1 for the occurrence of an economic downturn in country *i*.
- X_i is a set of country's structural and policy variables that affects regional inequalities (such as, the share of rural population, demographic changes, educational disparities, production diversification, the level of country development, the size of fiscal transfers and social spending).

- α_i represents country fixed effects.
- γ_j captures the persistence in changes in regional inequalities.
- β measures the unconditional effect of economic downturns on regional inequality.
- δ is the effect of structural and policy variables in shaping the response of regional inequality to economic downturns

For each period *k*, the effect of economic downturn on regional inequality is measured by: $\beta + \delta(X_{i,t} - \bar{X})$ IRFs are then obtained plotting the estimated effect for k=0,1,2…n.

Using an unbalanced panel of 29 OECD countries from 1993 to 2005, the paper shows that economic downturns are associated with a significant and long-lasting reduction in regional inequalities. The effect is a function of the severity of the downturn and it varies across countries. The empirical results are economically and statistically significant, and robust.

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